

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent application of: Jonathan P. Duvick, Jacob T. Gilliam, Joyce R. Maddox, Oswald R. Crasta, and Otto Folkerts

For: AMINO POLYOL AMINE OXIDASE POLYNUCLEOTIDES AND RELATED
POLYPEPTIDES AND METHODS OF USE ,

the specification of which is being transmitted herewith.

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
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Alexandria, VA 22313-1450

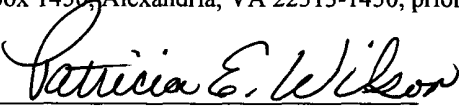
Dear Sir:

Attached is a copy of Form PTO-1449 listing the relevant art known to the applicant herein. The Examiner is requested to consider the references and make them of record. This application relies, under 35 U.S.C. § 120, on the earlier filing date of prior application Serial No. 09/770,564, filed on January 26, 2001. This application also relies, under 35 U.S.C. § 120, on the earlier filing date of prior application Serial No. 09/352,168, filed on July 12, 1999. Each of the references listed on Forms PTO/SB08A and 08B were submitted to, and/or cited by, the Patent Office in the prior application(s) and, therefore, are not required to be provided in this application.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 C.F.R. § 1.97(g)), an admission that the

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Patricia E. Wilson
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information cited is, or is considered to be, material to patentability, or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. (Notice of January 9, 1992, 1135 O.G. 13-25, at 25.)

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Heidi S. Nebel".

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Attorneys of Record

Form PTO-1449 U.S. Department of Commerce Patent and Trademark Office INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use several sheets if necessary)</i>	ATTORNEY DOCKET NO.	SERIAL NO.
	0875	09/352,168
	APPLICANT	
	Duvick, et al.	
	FILING DATE	GROUP
	July 12, 1999	

U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	A1	5 2 6 2 3 0 6	11/93	Robeson, et al.			4/90
	A2	4 9 8 8 5 8 6	1/91	Toyoda, H., et al.			7/87
	A3	5 1 7 8 8 6 3	1/93	Toyoda, H., et al.			1/91
	A4	5 7 1 6 8 2 0	2/98	Duvick, et al.			2/97

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes	No
	A5	96 3 2 0 0 7	10/17/96	WO				
	A6	96 0 6 1 7 5	2/29/96	WO				
	A7	99 0 2 7 0 3	1/21/99	WO				
	A8	93 0 2 6 7 3	2/18/93	WO				
	A9	95 0 6 1 2 8	3/2/95	WO				
	A10	96 2 0 5 9 5	7/11/96	WO				
	A11	96 1 2 4 1 4	5/2/96	WO				
	A12	95 0 6 4 1 5	3/9/95	WO				

OTHER DOCUMENTS (Including Author, Title, Date Pertinent Pages, Etc.)

	A13	Abbas, et al., 1992, <i>Weed Technology</i> , 6: 548-552, "Phytotoxicity of Fumonisin B ₁ on Weed and Crop Species ¹ "
	A14	Blackwell, et al., 1994, <i>J. of AOAC International</i> , 77(2): 506-511, "Production of Carbon 14-Labeled Fumonisin in Liquid Culture"
	A15	Gelderblom, et al., 1993, <i>Food Chem. Toxic.</i> , 31(6): 407-414, "Structure-Activity Relationships of Fumonisin in Short-Term Carcinogenesis and Cytotoxicity Assays"
EXAMINER		DATE CONSIDERED
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		

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		FILING DATE July 12, 1999	GROUP

OTHER DOCUMENTS (Including Author, Title, Date Pertinent Pages, Etc.)

A16	Van Asch, et al., 1992, <i>Phytopathology</i> , 82(11): 1330-1332, "Phytotoxicity of Fumonisin B ₁ , Moniliformin, and T-2 Toxin to Corn Callus Cultures"
A17	Vesonder, et al., 1993, <i>Arch. Environ. Contam. Toxicol.</i> , 24: 473-477, "Comparison of the Cytotoxicities of <i>Fusarium</i> Metabolites and <i>Alternaria</i> Metabolite AAL-Toxin to Cultured Mammalian Cell Lines"
A18	Tanaka, et al., 1993, <i>Phytochemistry</i> , 33(4): 779-785, "Structure-Dependent Phytotoxicity of Fumonisin and Related Compounds in a Duckweed Bioassay"
A19	He P., et al., 1992, <i>Applied and Environmental Microbiology</i> , 58(12): 3857-3863, "Microbial Transformation of Deoxynivalenol (Vomitoxin)"
A20	Kneusel, et al., 1994, <i>The J. of Biological Chemistry</i> , 269(5): 3449-3456, "Molecular Characterization and Cloning of an Esterase Which Inactivates the Macrolide Toxin Brefeldin A"
A21	Miller, J.D., et al., 1986, <i>Canadian J. of Plant Pathology</i> , 8: 147-150, "Degradation of deoxynivalenol by suspension cultures of the fusarium head blight resistant wheat cultivar Frontana"
A22	Ueno, et al., 1983, <i>Applied and Environmental Microbiology</i> , 46: 120-127, "Metabolism of T-2 Toxin in <i>Curtobacterium</i> sp. Strain 114-2"
A23	Utsumi, et al., 1991, <i>Agric. Biol. Chem.</i> , 55: 1913-1918, "Molecular Cloning and Characterization of the Fusaric Acid-resistance Gene from <i>Pseudomonas cepacia</i> "
A24	Vesonder, et al., 1992, <i>Arch. Environ. Contam. Toxicol.</i> , 23: 464-467, "Comparative Phytotoxicity of the Fumonisin, AAL-Toxin and Yeast Sphingolipids in <i>Lemna minor</i> L. (Duckweed)"
A25	Marth, et al., 1978, <i>J. Food Technol.</i> , 33: 81-87, "Update on molds: degradation of aflatoxin"
A26	Kneusel, et al., 1990, <i>FEBS Letters</i> , 275(1-2): 107-110, "Detoxification of the macrolide toxin brefeldin A by <i>Bacillus subtilis</i> "

EXAMINER

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		Duvick, et al.	
		FILING DATE	GROUP
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OTHER DOCUMENTS (Including Author, Title, Date Pertinent Pages, Etc.)

	A27	Toyoda, et al., 1988, <i>Phytopathology</i> , 78(10): 1307-1311, "Detoxification of Fusaric Acid by a Fusaric Acid-Resistant Mutant of <i>Pseudomonas solanacearum</i> and its Application to Biological Control of Fusarium Wilt of Tomato"
	A28	Bunz, et al., 1993, <i>Biodegradation</i> , 4: 171-178, "Purification of two isofunctional hydrolases (EC 3.7.1.8) in the degradative pathway for dibenzofuran in <i>Sphingomonas</i> sp. strain RW1"
	A29	Duvick, et al., 1992, <i>J. of Biol. Chem.</i> , 267(26): 18814-18820, "Purification and Characterization of a Novel Antimicrobial Peptide from Maize (<i>Zea mays</i> L.) Kernels"
	A30	Kraus, et al., 1992, <i>J. of Agri and Food Chem.</i> , 40(12): 2331-2332, "Synthesis of Analogs of Fumonisin B1"
	A31	Lotti, et al., 1993, <i>Gene</i> , 124: 45-55, "Cloning and analysis of <i>Candida cylindracea</i> lipase sequences"
	A32	Cygler, et al., 1993, <i>Protein Science</i> , 2: 366-382, "Relationship between sequence conservation and three-dimensional structure in a large family of esterases, lipases, and related proteins"
	A33	Arpagaus, et al., 1991, <i>J. of Biol. Chem.</i> , 266(11): 6966-6974, "Use of the Polymerase Chain Reaction for Homology Probing of Butyrylcholinesterase from Several Vertebrates"
	A34	Van Asch, et al., 1992, <i>Phytopathology</i> , 82: 1330-1332, "Phytotoxicity of Fumonisin B1, Moniliformin, and T-2 Toxin to Corn Callus Cultures"
	A35	Lagu, et al., 1992, <i>204th American Chemical Society National Meeting, Washington, D.C., USA</i> , "Synthesis of Fumonisin Analogs, Abstracts of Papers (Part 2)"
	A36	Zeiss, Hans-Joachim, 1991, <i>J. Org. Chem.</i> , 56(5) 1783-1788, "Enantioselective Synthesis of Both Enantiomers of Phosphinothricin via Asymmetric Hydrogenation of α -Acylamido Acrylates"
	A37	Ishizuka, H., et al, 1995, <i>XP002121274 Swissprot Accession No. 40974</i> , "Putrescine oxidase"
	A38	Horinouchi, S., et al., 1993, <i>XP002121474 EMBL Accession No. D12511</i> , "M. Rubens gene for putrescine oxidase, complete cds"
EXAMINER		DATE CONSIDERED
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		APPLICANT Duvick, et al.	
		FILING DATE July 12, 1999	GROUP

OTHER DOCUMENTS (Including Author, Title, Date Pertinent Pages, Etc.)

	A39	Duvick, et al., 1998, <i>Mol. Genetics of Host-Specific Toxins in Plant Disease</i> , 369-381, "Detoxification of Mycotoxins <i>In Planta</i> as a Strategy for Improving Grain Quality and Disease Resistance: Identification of Fumonisin-Degrading Microbes from Maize"
	A40	Blackwell, B.A., et al., 1999, <i>Natural Toxins</i> , 7(1): 31-38, "Oxidative Deamination of Hydrolyzed Fumonisin B ₁ (AP ₁) by Cultures of <i>Exophiala spinifera</i> "
	A41	Schilling, B., et al., 1995, <i>Mol. Gen. Genet.</i> , 247: 430-438, "Cloning, sequencing and heterologous expression of the monoamine oxidase gene from <i>Aspergillus niger</i> "
	A42	Anzai, et al., 1989, <i>Mol. Gen. Genet.</i> , 219: 492-494, "Transgenic tobacco resistant to a bacterial disease by the detoxification of a pathogenic toxin"
	A43	Kunst, F., et al., 1997, <i>XP 002121402</i> , <i>EMBL Accession No. Z99107</i> , "Bacillus subtilis complete genome"
	A44	Papoff, et al., 1996, <i>J. of Immunology</i> , 156(12): 4622-4630, "An N-Terminal Domain Shared by Fas/Apo-1 (CD 95) Soluble Variants Prevents Cell Death in Vitro ^{1,2} "
	A45	Alvarez, et al., 1997, <i>Oxidative Stress and the Molecular Biology of Antioxidant Defenses</i> , "Oxidative Burst-mediated Defense Responses in Plant Disease Resistance"
	A46	Lamb, et al., 1997, <i>Annu. Rev. Plant Physiol. Plant Mol. Biol.</i> , 48: 251-275, "The Oxidative Burst in Plant Disease Resistance"
	A47	Schrader, et al., 1996, <i>App. Microbiol Biotechnol</i> , 45: 458-464, "Studies on the inactivation of the flavoprotein α -amino acid oxidase from <i>Trigonopsis variabilis</i> "
	A48	Lamprecht, et al., 1994, <i>Phytopathology</i> , 84: 383-391, "Phytotoxicity of Fumonisin and TA-Toxin to Corn and Tomato"
	A49	Itagaki, et al., 1996, <i>J. of Biol. Chem.</i> , 33: 20102-20107, "Expression and Characterization of a Modified Flavin-containing Monooxygenase 4 from Humans*"
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		FILING DATE July 12, 1999	GROUP

OTHER DOCUMENTS (Including Author, Title, Date Pertinent Pages, Etc.)

A50	Quinet, et al., 1993, <i>J. of Biol. Chem.</i> , 23: 16891-16894, "Inhibition of the Cellular Secretion of Cholesteryl Ester Transfer Protein by a Variant Protein Formed by Alternative Splicing of mRNA"
A51	Bhat, et al., 1996, <i>Protein Engineering</i> , 9(8): 713-718, "Expression of recombinant α -A ^{ins} -crystallin and not α A-crystallin inhibits bacterial growth"
A52	Przemylaw, 1997, <i>Biochem J.</i> , 322: 681-692, "Oxidative burst: an early plant response to pathogen infection"
A53	Aguirre, et al., 1989, <i>J. Bacteriol.</i> , 171: 6243-6250, "Oxidation of <i>Neurospora crassa</i> NADP-Specific Glutamate Dehydrogenase by Activated Oxygen Species"
A54	Gould, et al., 1989, <i>J. Cell Biol.</i> , 108: 1657-1664, "A Conserved Tripeptide Sorts Proteins to Peroxisomes"
A55	Gilchrist, et al., 1992, <i>Mycopathologia</i> , 117: 57-64, "Genetic and physiological response to fumonisin and AAL-toxin by intact tissue of a higher plant"
A56	Schmiedeknecht, et al., 1996, <i>Eur. J. Biochem.</i> , 242(2) 339-351, "Isolation and characterization of a 14.5-kDa trichloroacetic-acid-soluble translational inhibitor protein from human monocytes that is upregulated upon cellular differentiation"
A57	Samuel, et al., 1997, <i>Hepatology</i> , 25(5) 1213-1222, "Hrp12, a Novel Heat-Responsive, Tissue-Specific, Phosphorylated Protein Isolated From Mouse Liver"
EXAMINER	
DATE CONSIDERED	
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FOREIGN PATENT DOCUMENTS

	Document Number	Date	Country	Class	Subclass	Translation Yes	No

OTHER DOCUMENTS *(Including Author, Title, Date Pertinent Pages, Etc.)*

A58	Tavladoraki, et al., 1998, <i>FEBS Letters</i> , 426: 62-66, "Maize polyamine oxidase: primary structure from protein and cDNA sequencing"
A59	Binda, et al., 1999, <i>Structure</i> , 7(3): 265-276, "A 30 A long U-shaped catalytic tunnel in the crystal structure of polyamine oxidase"
A60	Federico, et al., 1992, <i>Phytochemistry</i> , 31: 2955-2957, "Polyamine Oxidase Bound to Cell Walls From <i>Zea Mays</i> Seedlings"
A61	Angelini, et al., 1995, <i>J. Plant Physiol.</i> , 145: 686-692, "Maize Polyamine Oxidase: Antibody Production and Ultrastructural Localization"

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